REMARKS

Claims 1, 4-6, 9, and 12-14 have been amended. Claims 7 and 15 have been cancelled. Claims 21 and 22 have been added. Claims 1-6, 8-14, and 16-22 are currently pending in the application.

The Examiner rejected claims 8 and 17-18 under 35 U.S.C. § 102(e) as being anticipated by Morris et al. (6,665,010; hereinafter "Morris"). The Examiner rejected claims 1-6, 9-14 and 16 under 35 U.S.C. § 103(a) as being unpatentable over Morris in view of Abe (6,747,698). Applicant requests reconsideration of the application.

102(e) Rejection

Independent claims 8 and 17 recite "wherein the output signal values have signals that are generated from pixels within at least two physically separate rows within the array." One embodiment of this aspect of the claimed invention is shown in Applicant's figure 4b. One signal line (80) is used per row in the pixel array, but each signal line is routed to pixels in two adjacent rows. The vertical solid lines attached to each horitzonal dashed lines illustrate the routing of the signal lines to pixels in two adjacent rows. Routing each signal line to pixels in two adjacent rows allows each row of data readout from the sensor to include the data from the pixels in the two physically adjacent rows.

When evaluating a claim, the claim as a whole must be considered, and as such, every limitation in the claim must be considered. MPEP § 2106. In order for a reference to anticipate an invention, each and every element of the claimed invention must be found in a single reference. "The identical invention must be shown in as complete detail as is contained in the...claim." MPEP § 2131.

The Examiner argues Morris teaches Applicant's claim limitation of "wherein the output signal values have signals that are generated from pixels within at least two physically separate rows within the array" in lines 9-31 in column 7. Lines 9-31 in column 7 of Morris state:

-7-

Referring back to FIG. 5, to take a snapshot of an image during the normal mode, the pixel sensing units 118 accumulate energy over the respective integration intervals to electrically indicate intensities for the captured image. Next, the row decoder 121 begins retrieving the stored indications of these intensities from the pixel sensing units 118 by selectively, electrically selecting rows of the pixel sensing units 118. Once selected, the pixel sensing unit 118 transfers the indication of its intensity value to signal conditioning circuitry 126. A column decoder 122 may be used to select groups of the indications for each row. The signal conditioning circuitry 126 may, for example, filter noise from the indications and convert the indications into digital data before transferring the data to an output interface 128. The output interface 128 may include buffers for temporarily storing data and circuitry to interface the imager 140 to external circuitry (other components of a digital camera, for example). The image 140 might also include, for example, the control unit 129 which has circuitry such as state machines and timers to control the scanning and data flow through the chip 54 and control the durations of the integration intervals that are set by the time measurement circuits 130.

The Examiner argues this description teaches Applicant's claimed limitation because "the signal values that are generated from the array of pixel sensing units 118 are transferred to output interface 128." Although the statement regarding the transfer of signal values to the output interface is correct, Morris does not teach the output signal values have signals that are generated from pixels *within at least two physically separate rows within the array*. Nothing in figure 5 teaches or suggests routing each signal line to pixels in two adjacent rows.

In fact, Morris describes a prior art method of reading out data from an image sensor. The row decoder selects a row within the array and the column decoder selects which column (pixel) or columns (pixels) within the selected row to readout. The row decoder does not select another row until all of the pixels within the selected row are readout. Morris expressly states the row decoder can be used to select groups of the indications *for each row* (col. 7, lines 18-19).

And finally, Morris illustrates a pixel sensing unit 118 in figure 8. Nothing in this figure teaches or suggests routing each signal line to pixels in two adjacent rows. Morris does not show or describe having a signal line routed to pixels in two adjacent rows. Therefore, for at least the following reasons, Morris does not anticipate Applicant's independent claims 8 and 17.

"Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim." 37 CFR § 1.75. Claim 18 depends from and includes all of the limitations of independent claim 17. For at least the reasons discussed above, Morris does not anticipate independent claim 17. Accordingly, dependent claim 18 is also not anticipated by Morris.

103(a) Rejection

Independent claims 1 and 9, as amended, recite "a color filter pattern spanning at least a portion of the pixels, wherein the color filter pattern forms a plurality of color filter kernels having at least one color of every color in the color filter pattern in a predetermined arrangement with an identical pattern of colors in each color filter kernel, and wherein the color filter kernels are arranged in at least two different uniformly distributed sets that are correlated with the color filter pattern." Claims 1 and 9 further recite "a mechanism for independent control of an integration time of each color filter kernel according to its spatial location, wherein at least one color filter kernel includes at least one fast pixel having a first integration time and at least one slow pixel having a second integration time, wherein the first integration time is longer than the second integration time and data from the at least one slow pixel includes valid signal level information with adequate signal to noise ratio while data from the at least one fast pixel does not contain valid signal level information."
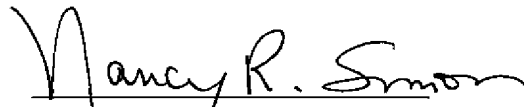
Nothing found in Morris and Abe teach or suggest these aspects of the claimed invention. Abe and Morris do not teach or suggest "a mechanism for independent control of an integration time of each color filter kernel according to its spatial location, wherein at least one color filter kernel includes at least one

-9-

fast pixel having a first integration time and at least one slow pixel having a second integration time, wherein the first integration time is longer than the second integration time and data from the at least one slow pixel includes valid signal level information with adequate signal to noise ratio while data from the at least one fast pixel does not contain valid signal level information." Therefore, for at least the following reasons, the combination of Morris and Abe does not render Applicant's independent claims 1 and 9 obvious.

Claims 2-6 and 19 depend from independent claim 1, and claims 10-14, 16, and 20 depend from independent claim 9. "If an independent claim is not rendered obvious by prior art, then any claim depending from the independent claim is not obvious. " In re Fine, 5 USPQ2d 1596 (Fed. Cir. 1988). Since the combination of Morris and Abe does not render independent claims 1 and 9 obvious, dependent claims 2-6, 10-14, 16, 19, and 20 are also not obvious in view of Morris and Abe.

In view of the foregoing it is respectfully submitted that the claims in their present form are in condition for allowance and such action is respectfully requested.

Respectfully submitted,

Attorney for Applicant(s)
Registration No. 36,930

Nancy R. Simon/phw
Rochester, NY 14650
Telephone: 585-588-4219
Facsimile: 585-477-4646
If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.